

## CLAIMS

What is claimed is:

1. A eukaryotic cell for producing a proteinaceous substance, said eukaryotic cell comprising:

a first nucleotide sequence encoding an adenoviral E1A protein;

a second nucleotide sequence encoding an adenoviral E1B protein;

wherein the genome of the eukaryotic cell lacks a nucleotide sequence encoding a structural adenoviral protein and wherein the eukaryotic cell does not express a structural adenoviral protein; and

a recombinant nucleotide sequence in expressible format encoding the proteinaceous substance.

2. The eukaryotic cell of claim 1, wherein the recombinant nucleotide sequence in expressible format encoding the proteinaceous substance forms part of the genome of the eukaryotic cell.

3. The eukaryotic cell of claim 1, wherein the eukaryotic cell is of a human cell origin.

4. The eukaryotic cell of claim 1, wherein the eukaryotic cell is of a retina cell origin.

5. The eukaryotic cell of claim 1, wherein the eukaryotic cell is of a primary cell origin.

6. The eukaryotic cell of claim 1, wherein the eukaryotic cell is of a human embryonic retinoblast origin.

7. The eukaryotic cell of claim 1, wherein the first and second nucleotide sequences encoding the adenoviral E1A and E1B proteins are integrated in the genome of the eukaryotic cell and are derived from nucleotides 459-3510 (SEQ ID NO: 33) of an adenovirus 5 genome.

8. The eukaryotic cell of claim 1, wherein the first nucleotide sequence encoding the adenoviral E1A protein is regulated by a human PGK promoter.

9. The eukaryotic cell of claim 1, wherein the eukaryotic cell is of a PER.C6 cell origin as deposited under ECACC no. 96022940.

10. The eukaryotic cell of claim 1, wherein the proteinaceous substance is a human protein.

11. The eukaryotic cell of claim 1, wherein the proteinaceous substance comprises a variable domain of an immunoglobulin.

12. The eukaryotic cell of claim 11, wherein the proteinaceous substance is an immunoglobulin.

13. The eukaryotic cell of claim 12, wherein the proteinaceous substance is a monoclonal antibody.

14. The eukaryotic cell of claim 1, wherein the proteinaceous substance is erythropoietin, or a functional derivative, homologue or fragment thereof.

15. The eukaryotic cell of claim 1, wherein the proteinaceous substance is a viral protein other than an adenoviral protein.

16. The eukaryotic cell of claim 15, wherein the viral protein is selected from the group consisting of an influenza virus neuramidase, an influenza virus hemagglutinin, an enterovirus protein or an epitope thereof, a herpes virus protein or an epitope thereof, an orthomyxovirus protein, a retrovirus protein, a parvovirus protein, a papovavirus protein, a rotavirus protein, a coronavirus protein, a togavirus protein, a rubella virus protein, an Eastern-equine encephalomyelitis virus protein, a Western-equine encephalomyelitis virus protein, a Venezuelan equine encephalomyelitis virus protein, a hepatitis causing virus protein, a hepatitis A protein, a hepatitis B virus protein, a pestivirus protein, a hog cholera virus protein, a rhabdovirus protein, a rabies virus protein, and antigenic fragments of any thereof.

17. The eukaryotic cell of claim 1, wherein the recombinant nucleotide sequence encoding the proteinaceous substance in expressible format comprises the sequence encoding the proteinaceous substance under control of a CMV promoter.

18. A cell culture comprising the eukaryotic cell of claim 1, together with a suitable medium.

19. The cell culture of claim 18, wherein the cell culture is a suspension culture.

20. The cell culture of claim 18, wherein the suitable medium is free of animal- or human-derived serum and animal- or human-derived serum components.

21. A process for producing a proteinaceous substance, the process comprising:  
culturing the eukaryotic cell of claim 1 in a suitable medium, thus allowing the eukaryotic cell to produce the proteinaceous substance; and  
harvesting the proteinaceous substance from the eukaryotic cell or the suitable medium.